Work	Ordei	· ID	53843
VVUIN	VI UU		JJUTJ



Page 1

November 19, 2009 11:31:58 AM

Item ID:

D206-667-101

Accept

Setup Start

Stop

**Revision ID:** 

Item Namc:

Start Date:

 $\mathbf{C}$ 

Crosstube Fwd

19/11/2009 Required Date: 04/12/2009 Start Oty: 1.00 Req'd'Qty: 1.00 **Cust Item ID:** 

**Customer:** 

Reference:

Approvals:

Process Plan:

Date 04/1-19

Date:

Tooling:

SPC (Y/N):

Date:

Rev.

Date:

Qty

Run

Stop

Start

Sequence ID/ Work Center ID Operation Description

**Revision Nbr** 

Set Up/

**Run Hours** 

Draw Number Draw Plan Code

Reject Accept Qty

Reject Number

Insp. Stamp

Draw Nbr D206-667-141

Rev C

100

DC

DOCUMENT CONTROL

Memo

0.00

0.00

Document Control

Photocopy bluefile and create labels as per PPP D206-667-101 CHG007

110



Packaging Packaging

Packaging

Memo

0.00

0.00

MB 09-11-20

120



CNC Delta 100 Bender

0.00

**BENDING MACHINE - CROSSTUBES** 

Memo

0.00

Bend tube as per Dwg D206-667-141 using CNC bender program 206B-fw and

Folio FT\_\_\_\_\_

Dart .	Aeros	pace	Ltd
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W/O: WORI				<b>VORK ORDER CHANGES</b>	· · · · · · · · · · · · · · · · · · ·				
DATE	STEP	PROCEDURE CHANGE				Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
								1	
Part No	D206	-667 - 101 PAR #:	Fault Ca	ntegory: (voss Lbes No	CR: (Yes)	No DQA	: _/	Date: <u>/</u>	v.17
				tion: <u>Scrup,</u> Q	_			Date: 🕹	0/02/18
NCR:5	3843	V	VORK OR	DER NON-CONFORMANC	E (NCR	)		. <del>/</del>	
DATE	STEP	Description of NC		Corrective Action Section B		Verific	rification Approval		Approval
		Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section		Chief Eng	QC Inspector
iolegir	丛 120	Tube Doverbent  See Din sheet  L(. Proces	1918 192/16 12/12/2	SCRAP PIO.UZ.16 TOWN HISH. TOO MATTER TO CUT.	MB	6 Silval	16	10/02/16 05/04/2	Slocker
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NOTE: D	⊥ ate & initia	l al all entries							

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

#### Work Order ID 53843

C



Page 2

November 19, 2009 11:31:58 AM

Item ID:

D206-667-101

Accept



Setup Start

Stop



Revision ID:

Item Name:

Crosstube Fwd

**Start Date:** 

19/11/2009

Start Qty: 1.00

Req'd Qty: 1.00



**Cust Item ID:** 

**Customer:** 

Reference:

Δ	nn	rn	V2	6.

Process Plan:

Date:

**Tooling:** 

Date:

Start Run

Qty



Required Date: 64/12/2009

QC:

Date:\_

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID

**Operation** Description

QC15- Crosstube Dimensional Check

Set Up/ **Run Hours**  Draw Number Draw Rev.

Plan Code

Accept Qty

Reject Reject Number Stamp

Insp.

130

QC

Quality Control

Memo

0.00

0.00

MF 10-2-16

W/O:			ES								
DATE	STEP	PROCEDURE CHANGE			Ву	Date (	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
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Part No	:	PAR #:	Fault Cate	gory:	NCR: Yes	No <b>DQA</b> :	l	Date:			
	Resolution: Disposition:										
NCR:			WORK ORDI	ER NON-CONFORMA	NCE (NCR	)					
DATE	STEP	Description of NC Corrective Action				Verificat		Approval	Approval		
DAIL	0121	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section	С	Chief Eng	QC Inspector		
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	<u> </u>										

#### Work Order ID 53843

November 19, 2009 11:31:58 AM



Page 3

Item ID:

D206-667-101

Accept



Setup Start



Stop

C **Revision ID:** 

Required Date: 04/12/2009

Item Name:

**Start Date:** 

Crosstube Fwd 19/11/2009

Start Qty: 1.00

Reg'd Qty: 1.00



**Cust Item ID:** 

Customer:

Reference:

A	nnrova	s:

Process Plan:

Date: Date: \_\_\_\_\_

Tooling: SPC (Y/N): Date:

Date:

Start

Stop

Sequence ID/ **Work Center ID** 

140



Crosstubes Crosstubes

Description

**Operation** 

Set Up/ **Run Hours**  Draw Number

Draw Rev.

Plan Code

Reject Accept Qty Qty

Run

Reject Number Stamp

Insp.

Crosstubes

Memo

0.00

0.00

1-Drill holes & ream using drill Jig DT8541 & DT8542 as per Dwg D206-667-141. Drill all (3) top holes.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8541 & DT8542 as per Dwg D206-667-141. Drill only the top (2) holes.

5-Drill pilot holes as per Dwg D206-667-141. Drill only the top (2) holes.

6-Drill Fwd rivet holes using drill Jig DT8787FWD as per Dwg D206-667-141. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8787AFT as per Dwg D206-667-141.

8-C'sink holes as per Dwg D206-667-141. Allow rivet to sit below surface to compensate for paint.

9-Scribe part # and batch # using vibrating stylus as per Dwg D206-667-141 Inside of Cuff(Do not engrave on outside of tube)

10-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-141

Dart Ae	rospace	Ltd
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W/O: W				ORK ORDER CHANG	GES				
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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							**		
			PAR #: NCR: Yes						
	Resolution: Disposition:							Date: _ 	
NCR:		<b>,</b>	WORK ORD	ER NON-CONFORM	ANCE (NC	R)			
DATE	STEP	Description of NC	Corrective Action Section B			Sign & Verific		Approval	Approval
		STEP Section A	Initial Chief Eng	Action Description Chief Eng	Dat		ion C	Chief Eng	QC Inspector
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#### Work Order ID 53843 November 19, 2009 11:31:58 AM



Page 4

Item ID:

D206-667-101

Accept

Setup Start

**Revision ID:** 

**Required Date: 04/12/2009** 

Crosstube Fwd Item Name:

**Start Date:** 

19/11/2009

Start Qty: 1.00

Rea'd Oty: 1.00

Cust Item ID:

**Customer:** 

Draw

Number

Reference:

Approvals:

Process Plan: Date:

Tooling: SPC (Y/N):

Set Up/

Date: Date:

Draw

Rev.

Plan

Code

Accept

Qty

Start Run

Reject

Qty

Stop

Stop

Sequence ID/ Work Center ID

150

HandFXtube

Hand Finishing Crosstubes

Operation Description

Crosstubes Chemical Conversion

Date:

Memo

**Run Hours** 0.00

0.00

QC3- Inspect Part Finish

Memo

0.00

0.00

Quality Control

170

160

QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

Quality Control

Insp.

Reject Number

Stamp

0.00

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W/O:		74.448	WORK ORDER CHANGES										
DATE	STEP	PRO	PROCEDURE CHANGE				Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
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	1		***************************************										
Part No	:	PAR #:	Fault Cate	gory:	NCR: Y	es N	o <b>DQ</b> ,	<b>A</b> :	_ Date: _				
			Disposition: QA										
NCR:		1	WORK ORD	ER NON-CONFORMA	NCE (N	ICR)							
DATE	STEP	Description of NC	Corrective Action Section B			Veriti			Approval	Approval			
DAIL	SIEF	Section A	Initial Chief Eng	Action Description Chief Eng		gn & Date		on C	Chief Eng	QC Inspector			
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#### Work Order ID 53843

November 19, 2009 11:31:58 AM

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Page 5

Item ID:

D206-667-101

Accept

Accept

Qty

Setup Start

Stop



**Revision ID:** 

Item Name:

Crosstube Fwd

19/11/2009

Start Qty: <1.00

Operation

Description

**Required Date: 04/12/2009** Reg'd Qty: 1.00



Cust Item ID:

**Customer:** 

Reference:

**Start Date:** 

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Process Plan: \_\_\_\_\_ Date: \_\_\_\_

Tooling:

Set Up/

**Run Hours** 

Date:

Draw

Number

Run

Plan

Code

Draw

Rev.

Start



QC: \_\_\_\_\_ Date: SPC (Y/N):

Date:

Stop

Reject

Qty

Number Stamp

Insp.

Reject

Sequence ID/ Work Center ID

180

Outsource2

Memo

Outsource process - NDT per QSI038 4.1

0.00

0.00

Outsource process - NDT

Liquid Penetrant Inspection as per QSI 038Or LPI as per ASTM 1417 Issue P/O:

Level 2 Attach copy of NDT results to work order

190

Packaging Packaging

Packaging

Memo

0.00

0.00

Ensure copy of NDT results attached to work order.

200

QC5- Inspect part completeness to step on W/O

0.00

Quality Control

0.00

Inspect for damage & ensure results are as per Dwg D206-667-103

Dart Aerospace
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W/O:			RK ORDER CHANG	GES					7	
DATE	STEP	PRO	OCEDURE CHAN	IGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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		<u> </u>								
Part No: PAR #:										
Resolution:			Disposition: Q			QA: N/C Closed: Date: _				
NCR:	e de la companya de l		WORK ORDE	R NON-CONFORM	ANCE	(NCR	)			<b>9</b> + 4,4444
DATE	STEP	Description of NC			tion B		Verific	ation	Approval Chief Eng	Approval QC inspector
	SIEP	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Section C			
										-

#### Work Order ID 53843 November 19, 2009 11:31:59 AM

C



Page 6

Item ID:

D206-667-101

Accept



Setup Start



Stop

**Revision ID:** 

Crosstube Fwd Item Name:

**Start Date:** 

19/11/2009

Start Qty: 1.00

**Required Date: 04/12/2009** Reg'd Qty: 1.00



**Cust Item ID:** 

**Customer:** 

Draw

Reference:

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Process Plan:

Date:

Tooling:

0.00

0.00

Date:

Start



Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID

210

SprayPaint

**Spray Painting** 

Operation Description

SprayPaint

Set Up/ **Run Hours** 

Number

Draw Plan Rev. Code

Accept Qty

Reject Qty

Run

Reject Insp. Number Stamp

Memo

1-Prime inside and outside crosstube as per QSI 005 4.2.1

\*\*\*\*\*\*\*Let tube sit up right for 30mins before hanging\*\*\*\*\*\*\*

P4500-P-23 Base

Batch: P4500-C-23 Catalist Batch:

Start time:

Finish:

220

Quality Control

QC14- Inspect Spray Paint

0.00

Memo

0.00

Wrap in plastic bag to protect from scratches

W/O:		WORK ORDER CHANGES												
DATE	STEP	PRO	OCEDURE CHA	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector				
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Part No				NCR: Yes No DQA: Date:										
	Re	esolution:						Date:						
NCR:	•	•	WORK ORDI	ER NON-CONFORMA	ANCE	(NCR	)							
DATE	STEP	Description of NC	Initial	Corrective Action Section Description				cation Approval		Approval				
		Section A	Chief Eng	Chief Eng	Date		Secti	on C	Chief Eng	QC Inspector				
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#### Work Order ID 53843



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November 19, 2009 11:31:59 AM

Item ID:

D206-667-101

C

**Revision ID:** Item Name:

**Start Date:** 

Crosstube Fwd

Start Qty: 1.00 19/11/2009

**Required Date: 04/12/2009** Req'd Qty: 1.00

Accept



Setup Start



Stop

**Cust Item ID:** 

**Customer:** 

Draw

Number

Reference:

Process Plan: \_\_\_\_\_ Date: \_\_\_\_

QC: \_\_\_\_ Date: \_\_\_\_

Tooling: SPC (Y/N):

Date:

Plan

Code

Draw

Rev.

Date:

Stop

Reject

Qty



Sequence ID/ Work Center ID

230



SprayPaint

Spray Painting

Operation **Description**  Set Up/ Run Hours

0.00

**SprayPaint** 

Memo

0.00

1-Paint outside crosstube with White Imron as per QSI 005

**OC14- Inspect Spray Paint** 

Memo

Imron 55U white paint Imron 125S activator

Batch: Batch:

Start:

240

0.00

0.00

Quality Control

Run

Accept

Qty

Start



Reject

Insp. Number Stamp

W/O:		WORK ORDER CHANGES												
DATE	STEP	PRO	DCEDURE CHA	NGE	B	,	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector				
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Part No	•	PAR #:	Fault Cate	gory:	NCR: Y	es N	o DQ/	 <b>A</b> :	Date:					
					QA: N/C Closed: Date:									
NCR:			WORK ORDI	ER NON-CONFORM	ANCE (N	CR)		-						
DATE	STEP	Description of NC		tion B		Verific	ation	Approval	Approval					
	0.2,	Section A	Chief Eng	Initial Action Description Chief Eng Chief Eng			Sign & Section C		Chief Eng	QC Inspector				

#### Work Order ID 53843 November 19, 2009 11:31:59 AM



Page 8

Item ID:

D206-667-101

Accept

	S

etup Start

Stop





**Revision ID:** 

Item Name:

C Crosstube Fwd

Start Date:

19/11/2009

Start Qty: 1.00

Req'd Qty: 1.00



**Cust Item ID:** 

**Customer:** 

Reference:

Δ	nnrovale	٠

Process Plan: Date:

Tooling:

Date:

Run

Start

Stop



Sequence ID/

Required Date: 04/12/2009

QC: \_\_\_\_\_ Date:

SPC (Y/N):

Draw

Draw

Plan

Accept

Reject Qty

Insp.

Work Center ID 250

Crosstubes Crosstubes

Operation Description

Crosstubes

Set Up/ **Run Hours** 

0.00

Number Rev.

Date:

Code

Qty

Reject Number

Stamp

Memo

0.00

1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI 015. Let cure for 12h after installation and prior to packaging. Note (3) top holes should be facing up.

A/R Magnobond 6398:

2-Torque clamps to 80-100 in lb

3-Install nut plates as per Dwg D206-667-141. Touch-up rivet heads with Imron

paint.

260

QC5- Inspect part completeness to step on W/O

0.00

Quality Control

Memo

0.00

W/O:			WORK ORDER CHANGES									
DATE	STEP		PR	OCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
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								**				
								:				
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Part No	:		PAR #:	Fault Category:	<b>NCR</b> : Ye	s No <b>DQ</b>	A:	Date: _				
	D	esolution:		Disposition	04.140	Classel.		Data				

NCR:		WORK ORDER NON-CONFORMANCE (NCR)												
		Description of NC		Corrective Action Section E	Verification	Approval	Ammuoval							
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	Approval QC Inspector						
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#### Work Order ID 53843

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November 19, 2009 11:31:59 AM Item ID:

D206-667-101

C **Revision ID:** 

Item Name:

Crosstube Fwd

**Start Date:** 

19/11/2009

Start Qty: 1.00

Required Date: 04/12/2009 Req'd Qty: 1.00

Accept



Setup Start



Run

Accept

Qty

Stop

Reject

**Cust Item ID: Customer:** 

Reference:

Approvals:

Process Plan: \_\_\_\_\_ Date: \_\_\_\_

Tooling:

SPC (Y/N):

Date:

Draw

Number

Date:

Draw

Rev.

Plan

Code

Start



Stop

Reject

Qty

Number Stamp

Insp.

Sequence ID/ **Work Center ID** 

270

Packaging

Packaging

Operation Description

Pick Kit

Memo

QC: \_\_\_\_ Date:

Set Up/ **Run Hours** 

0.00

0.00

280

QC

OC4-100% Inspect kits for completeness

0.00

0.00

Memo

Quality Control

290

Packaging Packaging

Packaging

Identify and pack for shipping as per PPP D206-667-101

Location:

PPP Rev:

0.00

0.00

W/O:		WORK ORDER CHANGES													
DATE	STEP	PRO	OCEDURE CHAN	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector						
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Part No	:	PAR #:	Fault Categ	ory:	NCR: Yes	No DQ	A:	Date:	L						
Resolution:			Disposition	:	_ QA: N/C (	Closed:		Date:							
NCR:			WORK ORDE	R NON-CONFORMA	NCE (NC	R)									
		Description of NC		Corrective Action Section	on B	Vorifi	nation	ation Approval App	Annua						
DATE	STEP	Section A	Initial Chief Eng	Action Description  Chief Eng	Sign Date	& Sect	Verification Approval Section C Chief Eng		Approval QC Inspector						
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#### Work Order ID 53843 November 19, 2009 11:31:59 AM



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Item ID:

D206-667-101

Accept

Setup Start

Stop



Revision ID:

C Item Name:

Crosstube Fwd

Start Qty: 1.00 19/11/2009

Req'd Qty: 1.00

**Cust Item ID:** 

**Customer:** 

Draw

Number

Reference:

**Start Date:** 

Process Plan:

Date:

QC21- Final Inspection - Work Order Release

Tooling:

Date:

Start

Run

Accept

Qty



Approvals:

**Required Date: 04/12/2009** 

QC:

Date:

SPC (Y/N):

Set Up/

**Run Hours** 

Date:

Draw

Rev.

Plan

Code

Stop

Reject

Qty

Number Stamp

Insp.

Reject

Sequence ID/ Work Center ID

300

Quality Control

Memo

Operation

Description

0.00

0.00

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W/O:		WORK ORDER CHANGES													
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector						
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Part No: PAR #: PAR #:															
NCR:				ER NON-CONFORMA				74							
DATE	STEP	Description of NC		Corrective Action Section B				Approval	Approval						
DATE	SIEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign Date	& Sect	cation ion C	Chief Eng	QC Inspector						
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#### **Picklist Print**

November 19, 2009 11:32:04 AM

Work Order ID: 53843

Parent Item:

Comments:

D206-667-101RevC

Parent Item Name: Crosstube Fwd



Start Date: 19/11/2009

Required Date: 04/12/2009

Page 1

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2873-043RevA		Manufactured	No	**		250	Each	43.0000	2.0000			

Nut Plate Assembly

Warehouse	Loc	: Qty	Loc Code		
<b>Location</b>					
Main Warehouse					
ST		43			
45370		2			
45422		1			
50002		20			
50871		20			
	250	Each	43.0000	2.0000	

D2873-045RevA

Manufactured

Nut Plate Assembly

Warehouse	Loc Qty	Loc Code	
<b>Location</b>			
Main Warehouse			
ST	43		
45210	3		
50001	40		

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W/O:			WC	RK ORDER CHANG	ES		*			,
Part No:	PRO	OCEDURE CHAI	NGE	В	у	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
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					,					
Part No	:	PAR #:	Fault Cate	gory:	_ NCR: \	es N	lo <b>DQ</b>	A:	Date:	
	Re	solution:	Disposition	n:	QA: N/	C Clos	sed:		Date:	
NCR:			WORK ORDE	R NON-CONFORMA	ANCE (N	ICR)		•••		
DATE	STED	Description of NC			ion B		Verific	cation	Approval	Approval
Part No:	Section A	Initial Chief Eng	Action Description Chief Eng		gn & Date	Secti		Chief Eng	QC Inspector	
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November 19, 2009 11:32:05 AM

Work Order ID: 53843

Parent Item:

D206-667-101RevC

Parent Item Name: Crosstube Fwd



Start Date: 19/11/2009

**Required Date: 04/12/2009** 

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2891-1RevA1	\ <u></u>	Manufactured	No			250	Each	63.0000	2.0000			

2.25 Support

Comments:

Warehouse	<u>L</u>	oc Oty	Loc Code		
Location					
Main Warehouse					
ST		63			
40336		1			
43880		18			<del></del>
45935		4			<del></del>
46159		20			
50952		20			
	250	Each	32.0000	4.0000	

D3595-063-395

Manufactured No



RUBBER CUSHION

Warehouse Location	Loc Oty	Loc Code	
Main Warehouse			
ST	32		
44667	32		

Dart	<b>Aeros</b>	pace	Ltd
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										1
W/O:			WC	ORK ORDER CHANG	GES					,
DATE	STEP	PRO	OCEDURE CHA	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
278.51										
Part No	:	PAR #:	Fault Cate	gory:	_ NCR:	Yes N	lo <b>DQ</b>	<b>A</b> :	_ Date: _	
	Res	solution:	Dispositio	n:	QA: I	V/C Clo	sed:		Date:	
NCR:		,	WORK ORD	ER NON-CONFORM	ANCE	(NCR)				
DATE	STEP	Description of NC			tion B		Verific	ation	Approvai	Approval
DAIL	SILF	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Secti		Chief Eng	QC Inspector

#### **Picklist Print**

November 19, 2009 11:32:05 AM

Work Order ID: 53843

Parent Item:

Comments:

D206-667-101RevC

Parent Item Name: Crosstube Fwd

Purchased

No



Start Date: 19/11/2009

Required Date: 04/12/2009

Page 3

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	٠.	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on . Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MS20601-AD4W8		Purchased	i	No			250	Each	300.0000	14.0000			
		1811 IB#I											

RIVET

Warehouse	Loc	: Oty	Loc Code			
<b>Location</b>						
Main Warehouse						
ST		300				
108521		100				
112203		200				
	270	Each	87.0000	4.0000		

AN5-30A

BOLT

Warehouse	Loc Qty	Loc Code	
Location			
Main Warehouse			
ST	87		
110467	37		
112933	50		

Shop Packet Print

W/O:		· · · · · · · · · · · · · · · · · · ·	W	ORK ORDER CHA	NGES		<del></del>			•
DATE	STEP	PRO	OCEDURE CHA	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		€*			žą.			o DQA:		
Part No	•	PAR #:	Fault Cate	gory:	NCF	R: Yes	No DQA	٨:	_ Date: _	
	Re	solution:	Dispositio	n:	QA:	N/C CI	osed:		Date: _	<del></del>
NCR:			WORK ORD	ER NON-CONFOR	RMANCE	(NCR	)			, ,
	STEP	Description of NC Section A	Initial Chief Eng	Corrective Action Action Description Chief Eng	Section B	Sign & Date			Approval Chief Eng	Approval QC Inspector
						· · · · ·				

#### **Picklist Print**

November 19, 2009 11:32:05 AM

Work Order ID: 53843

Parent Item:

D206-667-101RevC

Parent Item Name: Crosstube Fwd

Purchased

No

Comments:



Start Date: 19/11/2009

Required Date: 04/12/2009

Page 4

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN5-32A		Purchased	No			270	Each	211.0000		,		

Bolt

Loc Qty	Loc Code
211	<del></del>
3	
4	<u></u>
17	
37	
50	
100	
270 Each	164.0000 10.0000
	211 3 4 17 37 50 100

AN5-7A



Bolt

Warehouse	Loc Qty	Loc Code	
<b>Location</b>			
Main Warehouse			
ST	114		
110625	7		
112612	7		
113149	100		
Main Warehouse			
t	50		
112829	50		

W/O:			WC	ORK ORDER CHANG	ES	***			
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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		<i>r</i> '							are 1
									.4
Part No	•	PAR #:	Fault Cate	gory:	NCR: Yes	No DQ	A:	Date:	
		esolution:							
NCR:		,	WORK ORDI	ER NON-CONFORMA	NCE (NCR	)			· · · · · · · · · · · · · · · · · · ·
DATE	OTED	Description of NC		Corrective Action Section	on B	Verific	cation	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Secti		Chief Eng	QC Inspector
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#### **Picklist Print**

November 19, 2009 11:32:05 AM

Work Order ID: 53843

Parent Item:

D206-667-101RevC

Parent Item Name: Crosstube Fwd

Comments:



Start Date: 19/11/2009

**Required Date: 04/12/2009** 

Page 5

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	-Qty Issued	Date Issued	Status
AN960JD516		Purchased	No			270	Each	1,290.000	18.0000			

Washer

Nut

Warehouse	Loc Qt	<b>Y</b>	Loc Code			
<b>Location</b>						
Main Warehouse						
ST	12	90				
110363		46				
110523		57				
111279		39				
112082		64				
112314		84				
112828	5	00				
113149	5	500				
	270	Each	842.0000	4.0000		

MS21042L5

Purchased

No

Loc Qty Loc Code Warehouse

Location Main Warehouse

ST

842 110382 10 111127 111636 15 112314 813

W/O:	<u> </u>		WC	ORK ORDER CHANG	SES			<del></del>		4
DATE	STEP	PRO	DCEDURE CHA		i	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
									-	
<del></del>				•					* 9 <u></u>	<b>*</b>
Part No	:	PAR #:	Fault Cate	gory:	NCR:	Yes I	No DQ	A:	Date:	
		solution:								
NCR:		,	WORK ORD	ER NON-CONFORM	ANCE (	NCR	)			1.1.11
DATE	STEP	Description of NC	···		tion B	0, 0	Verific	ation	Approval	Approval
	0.2.	Section A	Initial Chief Eng	Action Description Chief Eng	;	Sign & Date	Secti	on C	Chief Eng	QC Inspector
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November 19, 2009 11:32:05 AM

Work Order ID: 53843

Parent Item:

D206-667-101RevC

Parent Item Name: Crosstube Fwd

Comments:



Start Date: 19/11/2009

**Required Date: 04/12/2009** 

Start Qty: 1.00

Required Qty: 1.00

Component Idem ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	t <sub>e</sub> :	Date Issued	Status
MS21920-20		Purchased	No			270	Each	135.3000	4.0000				

Clamp (per MIL-DTL-8783C)

Loc Qty	Loc Code			
135.3				
2				
12				
9.3				
10				
2				
50				
39				
11				
110 Each	2.0000 1.0000		<i>i</i> /	
		B-53562	MD	<u>09-</u> 11-26
	135.3 2 12 9.3 10 2 50 39 11	135.3  2 12 9.3 10 2 50 39 11 110 Each 2.0000 1.0000	135.3  2 12 9.3 10 2 50 39 11 110 Each 2.0000 1.0000	135.3  2 12 9.3 10 2 50 39 11 110 Each 2.0000 1.0000

D206-667-101TRNRevC Manufactured



Crosstube Turning Detail

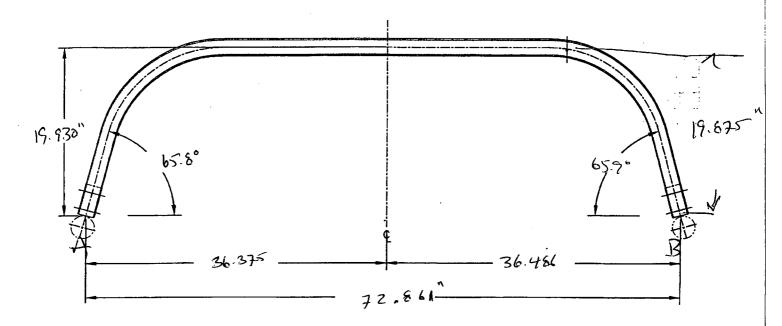
Warehouse	Loc Qty	Loc Code	
<b>Location</b>			
Main Warehouse			
LG	2		
50518	1		
50519	Ī		

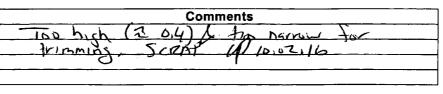
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W/O:			W	ORK ORDER CHANG	ES			
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Part No		PAR #:						
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NCR:			WORK ORD	ER NON-CONFORM	ANCE (NCR)			
DATE	STEP	Description of NC	Initial	Corrective Action Sect Action Description	ion B Sign &	Verification	Approval	Approval
		Section A	Chief Eng	Chief Eng	Date	Section C	Chief Eng	QC Inspector
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DART AEROSPACE LTD	Work Order:	538413
Description: Crosstube High Fwd (206B)	Part Number:	D206-667-101
Inspection Dwg: D206-667-141 Rev: C		Page 1 of 1

Required Dimension	Min	Max		
Height	19.41	19.67		
1/2 Span	36.47	36.73		
Angle	65	67		
Total Span	72.94	73.46		





QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
Α	07.02.06	New Issue	KJ/JM i O	1
В	09.07.30	Dimensions revised per Dwg Rev C	KJ X	1/2
			<del></del>	

Item Qty Part Number Description -141 D206-667-141 CROSSTUBE ASSEMBLY (2068 HIGH D6001-105 CROSSTUBE D2873-043 NUT PLATE D2873-045 **NUT PLATE** 2 D2891-1 SUPPORT D3595-063-395 RUBBER CUSHION 6 4 4 MS21920-20 CLAMP (OR MS21920-21) MS20601AD4W8 RIVET (OR NAS9302B-4-8) 8 14 9 A/R MAGNOBOND 6398 ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

#### GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6001-105
  - FINISHED LENGTH = 93.18±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2 PAINT OUTSIDE PER DART QSI 005 4.2
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-141" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 11.3 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 12 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0,005" MAY BE BLENDED OUT LONGITUDINALLY, CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

CONTRACTOR XLD537 4 1-6-5-5 UNCOSTRUCT IN SUBJECT OF STATE  $\mathbf{V} = \{v_1, \dots, v_n\} \in \mathcal{S}_{n+1}$ NO 53843 pl 09-11-19



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С	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3995-083-395 WAS D2856-400-694 (ZN D8-2 & A5-2); REMOVED REF. & ADD TOLERANCES (ZN C4-3, C5-3 & D3-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.					
В	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES			PH	05.07.26	
A	NEW I	NEW ISSUE			00.11.17	
REV.	DESCRIPTION			BY	DATE	
DESIGN 47		P	DART AEROSP	ACE	LTD	
DRAWN		RF <sub>2</sub>	HAWKESBURY, ONTAR			
CHECKED (A)		ar ar	DRAWING NO. REV. C			
MFG. APPR.		E ~	D206-667-141	06-667-141 SHEET 1 OF 4		
APPROVED ///		/ww	TITLE SCALE			
DE APPR.			CROSSTUBE ASSY (206B HIGH FWD) NTS			
DATE	ATE 08.11.06 COPYRIGHT © 2000 BY DART ABROSPACE LTD THE COCUMENT AIR WORK TO A SUPPLIES OF THE COUNTY OF THE COURT OF THE COUNTY OF THE COUNTY OF THE COURT OF THE COUNTY OF THE COURT OF THE COURT OF THE COUNTY OF THE COURT OF					

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